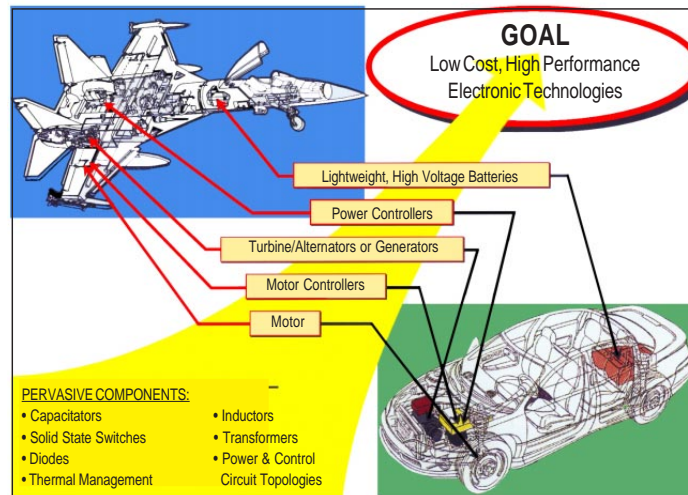




# AEROSPACE POWER TECHNOLOGIES TRANSFERRED

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## Payoff

A Vice Presidential initiative called the “Partnership for a New Generation of Vehicles” (PNGV), which focused the US automakers towards development of electric and hybrid electric consumer automobiles, has been the impetus for the transfer of aircraft electrical power technologies to the automobile industry. Although the DoD will be a smaller user of advanced electrical power technology than industry, the potential commonality of electrical components for both will result in dramatically reduced implementation costs on military systems.

## Accomplishment

The Propulsion Directorate’s Power Division facilitated the transfer of aircraft electrical power technologies to a Vice Presidential initiative called the “Partnership for a New Generation of Vehicles”. This initiative has focused the United States automobile industry toward development of electrical and hybrid electric vehicles.

## Background

In the early 1990’s a variety of concept studies were conducted to quantify the benefits of eliminating the currently used hybrid non-propulsive power system aboard aircraft with an all electrically-based subsystem. Predicted benefits were positive. In 1992, the potential of the more electric aircraft (MEA) concept was recognized and the application of this concept to aerospace vehicles was initiated jointly with NASA. This activity was initiated prior to the formation of the PNGV in 1993. By 1994, the concept of electrically-driven subsystems had grown to include ships and submarines, as well as ground vehicles, hence the name change to the broader more electric initiatives. As this initiative matured, it became known that there was a technology set represented in aerospace electrical power which is synergistic to all developmental efforts in conversion to electric drive. In March 1996, members of the Division participated in a PNGV symposium on electrical power systems. This symposium resulted in an awareness by automakers that the military was engaged in development of potentially enabling electric power technologies relevant to their “new generation” of automobiles. During a reception hosted by Vice President Al Gore, he acknowledged the Division’s participation in the symposium by commenting specifically on the excitement of bringing aircraft electrical power technology to bear on the PNGV initiative. As a means of providing details of DoD research and development in this area, the Division hosted a technology exchange meeting in June 1996. The programmatic information provided was praised by the Chrysler PNGV representative as a “benchmark” for future program reviews by the PNGV.